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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,822	11/12/2003	David L. Sherman	15826-111001/II-03-001	6936

26231 7590 02/10/2005

FISH & RICHARDSON P.C.
5000 BANK ONE CENTER
1717 MAIN STREET
DALLAS, TX 75201

EXAMINER	
JENKINS, JERMAINE L	

ART UNIT	PAPER NUMBER
2855	

DATE MAILED: 02/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/706,822	SHERMAN ET AL.
	Examiner	Art Unit
	Jermaine Jenkins	2855

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-26 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) 26 is/are allowed.

6)☒ Claim(s) 1-18 and 20-24 is/are rejected.

7)☒ Claim(s) 19 and 25 is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-18 & 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ekstrom Jr. (4,221,134) in view of Nelson (5,187,985).

In regards to claims 1 & 12, Ekstrom Jr. teaches a pressure measuring system (5) having a coupling device (12, being interpreted as bolts), a pressure-conveyance media (being interpreted as fluid) responsive to external pressure on the coupling device (12) (Column 3, lines 19-40), a pressure sensor operable to sense a pressure of the pressure-conveyance media, temperature sensor operable to sense a temperature of the pressure-conveyance media (Column 2, lines 5-10 & Column 9, lines 50-60). Ekstrom Jr. does not teach a processor operable to determine external pressure on the coupling device based on the pressure-conveyance media and the temperature of the pressure-conveyance media.

Nelson teaches a pressure transducer having a processor (being interpreted as a compensation circuit) operable to determine external pressure (Column 3, lines 5-22). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a processor as taught by Nelson in the pressure measuring system of Ekstrom Jr.

for the purpose of increase accuracy and sensitivity at very low magnitudes of pressures (Nelson, Column 3, lines 23-27).

With respect to claims 2, 13 & 21, Ekstrom Jr. teaches the coupling device (12) comprises a seal (10, 11, being interpreted as orifice plates) in which the pressure-conveyance media is at least partially disposed, the seal (10, 11) adapted to couple to a process and to mechanically respond to pressure exerted by a process media (Column 3, lines 53-66; Figure 1 & 4).

With respect to claim 3, Ekstrom Jr. teaches the seal (10, 11) comprises a diaphragm (13) that is operable to mechanically respond to pressure exerted by a process media and to convey the response to the pressure-conveyance media (Column 5, lines 19-29).

With respect to claim 5, Ekstrom Jr. teaches the pressure sensor comprises a piezo-type sensor (Column 4, lines 15-21).

With respect to claim 6, Nelson teaches the temperature sensor comprises a resistive temperature device (Column 8, lines 20-35).

With respect to claim 7, Nelson teaches the processor is further operable to generate a signal representing the determined pressure (Column 2, lines 45-62).

With respect to claims 8, 15, 16, 23 & 24, Ekstrom Jr. teaches a visual output device (4) operable to display indicia representing the determined external pressure based on the generated signal (Column 4, lines 35-40; See Figure 1).

With respect to claims 9, 14 & 22, Nelson teaches wherein determining external pressure on the coupling device based on the pressure of the pressure-conveyance media and the temperature of the pressure-conveyance media (Column 3, lines 5-22) comprises compensating

the pressure of the pressure-conveyance media based on the temperature of the pressure-conveyance media and determining external pressure on the coupling device based on the compensated pressure of the pressure conveyance media (Column 2, lines 45-52).

3. In regards to claims 10, 11 & 20, Ekstrom Jr. teaches a coupling device comprising a diaphragm mechanically responsive to external pressure, a pressure-conveyance media disposed at least in part in the coupling device and responsive to the diaphragm (Column 3, lines 19-40), a pressure sensor positioned to sense a pressure of the pressure-conveyance media, a temperature sensor positioned to sense temperature of the pressure-conveyance media (Column 2, lines 5-10 & Column 9, lines 50-60). Ekstrom Jr. does not teach a processor operable to determine external pressure on the diaphragm based on the pressure-conveyance media and the temperature of the pressure-conveyance media.

Nelson teaches a pressure transducer having a processor (being interpreted as a compensation circuit) operable to determine external pressure (Column 3, lines 5-22). Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a processor as taught by Nelson in the pressure measuring system of Ekstrom Jr. for the purpose of increase accuracy and sensitivity at very low magnitudes of pressures (Nelson, Column 3, lines 23-27).

4. Claim 4 rejected under 35 U.S.C. 103(a) as being unpatentable over Ekstrom Jr. (4,221,134) in view of Nelson (5,187,985) as applied to claims 1-3 & 5-24 above, and further in view of Murphy et al (5,286,931).

With respect to claim 4, Ekstrom Jr. and Nelson teach the claimed invention except for Murphy et al teaches a pressure-conveyance media comprises glycerin. Murphy et al teaches a pressure gauge having a media comprises a glycerin (Column 1, lines 42-61). It would have been obvious to one having ordinary skill in the art at the time to provide a glycerin as taught by Murphy et al in the system of Ekstrom Jr. and Nelson for the purpose of dampening the vibration of the movable parts of the housing (Column 1, line 66-Column 2, line 2).

Allowable Subject Matter

5. Claim 26 is allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: The prior art does not disclose or suggest a pressure-conveyance media at least partially disposed in the seal, the pressure of the pressure-conveyance media responsive to the mechanical response of the diaphragm; a strain-gauge pressure sensor coupled to the pressure-conveyance media and operable to sense a pressure of the pressure-conveyance media and to generate a signal representative thereof; a thermocouple temperature sensor coupled to the pressure-conveyance media and operable to sense a temperature of the pressure-conveyance media and to generate a signal representative thereof; a thermocouple temperature sensor coupled to the pressure-conveyance media and operable to sense a temperature of the pressure-conveyance media and to generate a signal representative thereof; a visual output device coupled to the microprocessor, the visual output device operable to display the indicia representing the pressure exerted externally on the diaphragm by the process media based on the signal generated by the processor.

7. Claims 19 & 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermaine Jenkins whose telephone number is 571-272-2179. The examiner can normally be reached on Monday-Friday 8am-430pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jermaine Jenkins
A.U. 2855

EDWARD LEFKOWITZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800